BP Exploration (Alaska) Inc. (BPXA)
Greater Prudhoe Bay (GPB) Unit
Oil Program – 40 CFR Part 112
SPCC/FRP Inspection Report

FACILITY INFORMATION:

Facility Name:	BPXA – Greater Prudhoe Bay (GPB) Unit
Physical Address:	North Slope, Alaska
Mailing Address:	PO Box 196612, 900 East Benson Blvd., Anchorage, Alaska 99519-6612
Facility Phone No.:	(907) 564-4566 (Crisis Management Coordinator - Anchorage)
Fax Number:	(907) 564-5180

FACILITY OWNER/OPERATOR INFORMATION:

Owner/Operator Name:	BP Exploration (Alaska) Inc.
Mailing Address:	PO Box 196612, 900 East Benson Blvd., Anchorage, Alaska 99519-6612

FACILITY REPRESENTATIVE CONTACT INFORMATION:

Name:	Mike Bronson – Crisis Management Coordinator
Company:	BP Exploration (Alaska) Inc.
Mailing Address:	PO Box 196612, 900 East Benson Blvd., Anchorage, Alaska 99519-6612
Phone Number:	(907) 564-4566
Fax Number:	(907) 564-5180

INSPECTION CONDITIONS:

EPA Inspection #:	AK-07-735
Inspection Date(s):	September 24-28, 2007
Inspection Time(s):	Approximately 0830 -1800 hours each day

Inspectors (EOA Team):	Earl Liverman, EPA Region 10 OSC, Lead Inspector Richard Franklin, EPA Region 6 OSC, Inspector Len Marcus, START3 (E & E), Inspector
Inspectors (WOA Team):	Matt Carr, EPA Region 10 OSC, Lead Inspector Jennifer Fitchorn, Inspector/EPA Region 10 OCE Representative Ryan Whitchurch, START3 (E & E), Inspector

Additionally, Larry Disbrow of the US Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Pipeline Safety alternated between the two teams as a pipeline advisor to the EPA.

Weather: Clear to cloudy. Light variable winds. Temperatures in the 30's (degrees Fahrenheit). Occasional blowing snow with minor accumulation.

INSPECTION PURPOSE:
The purpose of this inspection was to determine whether this facility is in compliance with the Spill Prevention Countermeasure and Control (SPCC) and Facility Response Plan (FRP) requirements outlined in Title 40 Code of Federal Regulations (CFR) Part 112. Printouts of the EPA SPCC/FRP database forms for this inspection are included in Attachment A of this report.

The geographic location of the Greater Prudhoe Bay (GPB) Unit dictates that a discharge could affect navigable waters of the United States. The navigable waters that could be impacted by oil discharges from this facility include the wet tundra environment the facility is located within (consists of tundra vegetation and open ponds), rivers (such as the Kuparuk, Putuligayuk, and Sagavanirktok Rivers) that are crossed by pipelines or which individual facility sites are situated by, and the coastline of the Beaufort Sea, which includes Prudhoe Bay and adjoining bays and lagoons that individual facility sites also sit along or are located nearby. The local topography is mostly flat with minimal elevation changes but surface drainage generally migrates north to the Beaufort Sea.

GENERAL FACILITY INFORMATION:
On September 23, EPA inspectors mobilized to Alaska's North Slope to conduct a multi-day inspection of BPXA's Greater Prudhoe Bay onshore oil production facility. The inspections at various facility "sites" (individual oil production or support stations) were conducted from September 24-28, 2007. GPB has been in operation since 1977 and is organized into two sections – the Eastern Operating Area (EOA) and the Western Operating Area (WOA). BPXA was the original operator of the WOA and ARCO was the initial operator of the EOA. In 2000, BP purchased ARCO and has been operating all of GPB since then on behalf of the GPB facility owners: ExxonMobile (36.5% ownership), ConocoPhillips (36.2 % ownership), BPXA (26.4 % ownership), and other companies (0.9 % ownership). The landowner of GBP is the State of Alaska. Other than worker housing camps in the oilfield, the nearest community is Deadhorse, Alaska, located on the southern edge of GPB. Deadhorse is almost exclusively a support town for North Slope oilfields.

GPB comprises approximately 1,200 oil production wells on more than 40 gravel pads, approximately 1,100 miles of aboveground pipelines (includes flowlines, gathering lines and other piping), seven oil processing centers, large plants for natural gas treatment and compression, seawater treatment and injection plants, a crude oil topping refinery, a gas-fired electrical power plant providing electricity to the entire Unit, and three major housing and operations centers. All these individual sites are located on constructed gravel pads and are interconnected by gravel roads. Most of the facility's individual sites are associated with oil production and were inspected under EPA's SPCC regulations for onshore oil production facilities (40 CFR Part 112.9). Several sites, however, are classified as non production-related bulk oil storage facilities and were inspected under EPA's SPCC regulations for onshore facilities excluding production facilities (40 CFR Part 112.8). BPXA currently considers all of GPB to be a single "facility" for EPA SPCC compliance purposes.

Oil processed by BPXA in GPB is piped to Alyeska Pipeline Service Company's (Alyeska) Pump Station 1, also located within GPB. At Pump Station 1, the oil enters the 800-mile long Trans-Alaska Pipeline for transport to the marine loading facility in Valdez, Alaska. Alyeska operations are separate from BPXA and were not included in this inspection event. Oil exploration activities have mostly been completed in GPB but well drilling may still occur.

EPA staffed separate inspection teams (each consisting of EPA and START, and periodically, DOT personnel) between the EOA and WOA. The individual BPXA-operated sites within GBP that were inspected under this event, and the applicable SPCC regulations each was inspected under, consist of:

Eastern Operating Area (EOA)
Regulated as onshore oil production facilities (40 CFR Part 112.9):

1. Flow Station 1 (FS1)
2. Flow Station 2 (FS2)
3. Flow Station 3 (FS3)
4. Lisburne Production Center (LPC)
5. Drill Site 11 drill pad
6. Drill Site L3 drill pad

Regulated as onshore facilities excluding production facilities (40 CFR Part 112.8):

7. East C Pad
8. Crude Oil Topping Unit (COTU)

Western Operating Area (WOA):
Regulated as onshore oil production facilities (40 CFR Part 112.9):

1. Gathering Center 1 (GC1)
2. Gathering Center 3 (GC3)
3. Base Operations Center (BOC)
4. A Pad drill pad
5. C Pad drill pad
6. D Pad drill pad
7. G Pad drill pad
8. T Pad drill pad
9. Price Pad drill pad
10. Santa Fe Pad drill pad

Regulated as onshore facilities excluding production facilities (40 CFR Part 112.8):

11. Base Operations Center (BOC) Bulk Fuel Site
12. Base Operations Center (BOC) Bulk Chemical Site

Several depots for oil spill response equipment maintained by BPXA's North Slope emergency response contractor, Alaska Clean Seas (ACS), were also visited as part of the GPB inspection.

INSPECTION ENTRY:
The EOA and WOA inspection teams functioned separately, each with a Lead Inspector. Each day inspection teams drove to the intended inspection sites (each inspection team included a driver trained in BPXA's Driving Safety Awareness course). Each team was accompanied by at least one BPXA regulatory or environmental management representative – for the EOA team, alternate persons were Keri DePalma and John Dixon (BPXA EOA HSE Environmental Advisors), and for the WOA, these persons were Amy Peloza (BPXA Crisis Management coordinator) and Bob Lipchek (BPXA WOA HSE Environmental Advisor). BPXA Crisis Management Coordinator Mike Bronson alternated accompanying each team. The teams also coordinated their activities with John Booth, BPXA North Slope Environmental Team Leader. At each inspected site, the inspectors also met with and were escorted by site-specific operators, who provided site-specific operations and administration information. At each inspected site, the inspection team was always initially provided with a safety and security briefing, and in turn, the inspectors explained to the operators and escorts the purpose of the SPCC and FRP inspections, a review of the applicable EPA regulations, and an overview of the team's inspection procedures, including a request to review pertinent facility documents. Each inspection typically began with an initial meeting to discuss site operations with BPXA personnel along with a review of pertinent portions of the SPCC Plan by the inspectors. Site operators were queried on various activities to determine employee's familiarity with the SPCC Plan contents and protocols and to gain an overall idea as to whether compliance of various SPCC components was being achieved. SPCC-related records that the inspectors asked for were produced when possible. Other records were obtained from BPXA's Anchorage office subsequent to the onsite inspection. Following initial meetings, each inspection continued with a physical inspection of the site. Both indoor and outdoor areas of oil storage and handling equipment were viewed where applicable.

SPCC Plan review observations are discussed below. See the following **"Field Inspection Observations"** section for details of field inspection observations and discussions.

It should be noted that comments in this report and SPCC inspector findings do not take into account EPA's proposed SPCC rule changes, issued in Federal Register Volume 72, No. 189 on October 15, 2007, which include streamlined requirements for oil production facilities.

PLAN REVIEW OBSERVATIONS:
BPXA maintains a regulatory integrated contingency plan (ICP) that covers all of GPB. The ICP is titled as and organized as a State of Alaska Oil Discharge Prevention and Contingency Plan (ODPCP) but incorporates EPA's SPCC and Facility Response Plan (FRP) requirements called for under 40 CFR Part 112. Besides addressing EPA and State of Alaska requirements, the ICP also incorporates DOT, MMS, and US Coast Guard requirements as applicable. The ICP reviewed at the time of the inspection (hereafter referred to as the ODPCP) displayed a cover date of June 2007 and contained revisions with dates up to September 2007. The FRP portion of the ODPCP was most recently approved by EPA on September 16, 2005, for a five year period ending September 20, 2010 (Region 10 tracking #FRPAKA0042).

The SPCC Plan information within the June 2007 ODPCP was written to address EPA SPCC regulatory changes issued in 2002. Management approval for the SPCC Plan is dated July 3, 2007, and Professional Engineer certification is dated February 15, 2006. Some of the SPCC-specific information is contained in an EPA-labeled appendix of the ODPCP, while other SPCC-related information is interspersed throughout the ODPCP. A cross-reference is provided.

See the **"Records Review Observations"** section later in this report for additional information regarding documents that were obtained during or subsequent to the inspection.

The following potential discrepancies or areas of concern were identified during the SPCC Plan review:

1. **Facility diagrams:** 40 CFR 112.7(a)(3) requires a facility diagram marking the location and contents of each container and including all transfer stations and connecting pipes. Sections 6.2 and 6.3 of the *SPCC Guidance for Regional Inspectors* provide guidance for preparing facility diagrams. The diagrams in the GPB ODPCP intended to serve as SPCC diagrams were evaluated against these requirements. Diagrams for many sites (FS1, FS2, FS3, LPC, COTU, DS11, DSL3, GC1, GC3, BOC Bulk Fuels, BOC Bulk Chemical, A Pad, C Pad, D Pad, G Pad) were noted to be missing location markings for various EPA-regulated oil storage containers observed at the facility, including some stationary tanks, oil-filled operationing equipment (OFOE) with capacities greater than 55-gallons (examples: electrical transformers and hydraulic valve actuator systems), oil separation and treating vessels and equipment with capacities greater than 55-gallons (given the large extent of this equipment, key or concentrated areas of this equipment at least should be shown), and long-term storage locations for mobile containers and drums. The SPCC Plan states that since OFOE is excluded from classification as a bulk storage container, these items are not mapped or listed in the SPCC Plan. The *SPCC Guidance for Regional Inspectors* points out that OFOE are to appear in facility diagrams.

2. **Oil storage containers listings:** 40 CFR 112.7(a)(3)(i) requires the SPCC Plan to indicate the type of oil in each container and its storage capacity. SPCC Plan-related container listings in the GPB ODPCP consist of Table 3-1 (regulated stationary storage tank data for tanks >10,000 gallons), Table 3-2 (regulated portable storage tank data for tanks >10,000 gallons) and a table in Appendix A (SPCC Plan regulated oil storage containers <10,000 gallons). These oil storage container inventories do not accurately reflect all EPA-regulated oil storage containers the inspectors observed at many inspected sites (FS1, FS2, FS3, LPC, DS11, GC1, GC3, BOC Bulk Fuels, BOC Bulk Chemical, Pad A, Pad C, Pad D, Pad G). Examples of containers not listed that should be include OFOE with capacities greater than 55-gallons (including electrical transformers and hydraulic valve actuator systems), oil separation and treating vessels and equipment with capacities greater than 55-gallons, and oil-based additive tanks.

3. **Secondary containment:** 40 CFR 112.9(c)(2) requires all tank battery, separation, and treating facility installations at oil production facilities to have a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. 40 CFR 112.8(c)(2),(8), and (11) address secondary containment and

overfill prevention device requirements for containers at non-production facilities.

a. Indoors oil separation and treating vessels and equipment with capacities greater than 55-gallons). The SPCC Plan includes secondary containment provisions for traditional tanks and mobile/portable oil storage containers listed in the container inventories. No similar containment information is provided for any of the oil separation and treating vessels and equipment with capacities greater than 55-gallons at GPB. Much of this equipment is inside modules (see below for exceptions). The modules may be designed to contain or direct spillage, but the Plan contains only a very general reference to floor sumps in process and maintenance facilities (page SPCC-6 in the ODPCP), but the "Specific Conformance to 40 CFR 112.9 Production Facilities" information on pages SPCC-10 and SPCC-11 adds little to this subject. Inspectors did note during physical inspections that some modules do have floor sumps, raised floor edges, or other floor drain systems leading to tanks or impoundments, but the Plan contains no written description of containment system designs, construction materials, or holding capacities. This information is needed for all applicable GPB sites. Once available, the information can be compared to separation and treating vessel storage capacity information (also missing from the Plan) to identify whether adequate secondary containment exists for these items**.**

b. Outdoors oil separation and treating vessels and equipment with capacities greater than 55-gallons). At LPC, GC1, and GC3, portions of oil separation vessels extend out from the modules they originate in. Portions within modules may possibly be protected through the structure confines (see discussion above); however, secondary containment provisions for portions of these vessels outside the modules were not apparent. As mentioned above, secondary containment measures for all oil separation and treating vessels and equipment with capacities greater than 55-gallons is not well addressed in the SPCC Plan, and the lack of related information in the Plan for drainage controls for outdoor SPCC-subject equipment makes secondary containment requirement compliance questionable.

c. Tanks and mobile/portable containers. Secondary containment provisions for the stationary Turbinol Select storage tanks at the BOC Bulk Chemical site were not found discussed in the SPCC Plan and were not apparent at the tank locations. The SPCC Plan did not mention whether any overfill prevention devices were installed on tanks at the BOC Bulk Fuel and Bulk Chemical sites. Secondary containment provisions for mobile/portable containers noted at the BOC Bulk Chemical site were not found discussed in the SPCC Plan.

d. Truck loading areas. Oil products loading (transfer) areas are considered subject to EPA's 112.7(c) general secondary containment provisions. Secondary containment measures for loading areas at the LPC, FS2, and FS3 sites were not apparent to the inspectors, and the only related information in the SPCC Plan is that loading areas for tanks at those sites is either 'not applicable" or has a waiver (per ODPCP Table 3-1). The reason for the not applicable designation or the waiver was not found addressed in the SPCC Plan. Therefore, the SPCC Plan should provide adequate documentation supporting an impracticability or extenuating circumstance claim. Secondary

containment information for all other loading areas appears to be present in the SPCC Plan.

4. **Impracticability of Secondary Containment (under the title of "Deviation From Spill Containment [40 CFR 112.7(d)], page SPCC-6):** The SPCC Plan includes impracticability statements for secondary containment for several types of containers and facility piping, as allowed by 40 CFR 112.7(d). The following paragraphs briefly summarize the scope and adequacy of each impracticability claim:

   a. Portable Tanks in Storage. A secondary containment impracticability claim is made in the SPCC Plan for mobile/portable oil storage containers that are emptied and stored but not rendered permanently closed. These containers are typically subject to general secondary containment requirements under 112.7(c). The SPCC Plan states that secondary containment is not appropriate or practical for these containers and describes the reduced release potential of these containers and facility-imposed tank management and inspection procedures. The inspectors observed one such marked and controlled empty container storage area (Junior J Pad). The impracticability claim for emptied containers is considered acceptable.

   b. Pipelines. SPCC-regulated flowlines, gathering lines, and intra-facility piping at GPB are subject to general secondary containment requirements under 112.7(c). The SPCC Plan describes that "oil pipelines are elevated above tundra, ponds and streams. These surfaces are not conducive to secondary containment systems. The hundreds of miles of pipelines are exposed to seasonal flooding, high winds and accumulations of ice and snow that preclude use of long-term secondary containment surface structures". Although possibly true for "cross-country" or off-pad flowlines and gathering lines that are travel over tundra, this impracticability claim is considered inadequate regarding the extensive amount of outdoor SPCC-regulated piping that exists over pad areas, as secondary containment surface structures are utilized on gravel pads, such as in containment cell applications for outdoor tanks.

   c. Transformers and Circuit Breakers. The inspectors observed that elevated, outdoor OFOE with apparent capacities greater than 55-gallons was without apparent secondary containment at some outdoor substations, while other outdoor substations featured containment for this type equipment via platform-integrated or surface-based containment systems. The SPCC Plan contained no listing of these items, but stated that installation of new secondary containment is not practical under existing transformers and circuit breakers. This impracticability claim is considered inadequate because the SPCC Plan is not clear on why containment provisions cannot be provided at all needed locations, and no descriptive information regarding the "regular inspections" applied by BPXA's Central Power Station's Transmission and Distribution specialists, intended as an alternative to satisfy the impracticability claim, appears in the SPCC Plan.

   d. ADEC-Waivered Stationary Tanks. The SPCC Plan states that full-sized secondary containment is impracticable underneath tank numbers T-01-773 at GC1, T-03-7500 at GC3, 15-951 at FS1, and 16-1951 at FS2 (range in size from 7,600 to 11,750

barrels) and discusses space and structural limitations preventing the installation of containment systems. The SPCC Plan does discuss alternate means to prevent discharges from these containers: performing visual and integrity tank, valve, and piping inspections, the presence of internal tank coatings, and maintaining FRP-level response capabilities with a facility commitment to spill response. The SPCC Plan also contains a Professional Engineer-approved technical amendment certifying this impracticability claim (dated August 31, 2007). This impracticability claim adequately justifies why secondary containment is impracticable and provides suitable alternatives, and is therefore considered acceptable.

5. **Proper SPCC Classification of Individual Sites and Associated SPCC Plan Discussions.** The SPCC Plan states that the COTU is the only non-production facility within the GPB Unit and contains related non-production information for the COTU site. The inspectors agree that the COTU falls into that classification but also identify East C Pad in the EOA and the WOA's BOC Bulk Fuel Site and Bulk Chemical Site as non-production facilities. Presently, the SPCC Plan is deficient in addressing non-production facility applicable regulations (112.8 as well as 112.7(g)) to the other three sites. Examples of non-production facility topics currently addressed in the SPCC Plan for the COTU but not for the other three non-production sites include security measures, and a discussion and implementation of oil transfer area or piping vehicle warning signs required under 112.8(d)(5). Note: The COTU security discussion in the SPCC Plan includes an equivalent protection measure, allowable under 112.7(a)(2), as an alternative to the security requirement under the 112.7(g) SPCC rule; the described and implemented equivalent measure of maintaining security through controlled facility access and security monitoring is considered acceptable.

FIELD INSPECTION OBSERVATIONS:

Field inspection activities included direct observation of facility operations and equipment, and discussions with BPXA personnel regarding equipment operation, management, and inspection procedures.

Facility inspection observations. The EPA inspectors were escorted on physical inspections at the inspected sites and were provided full access where requested. The inspections included viewing interior oil processing operations and support buildings, exterior stationary and mobile oil storage containers, oil loading areas, well housings and well piping manifold areas, truck loading areas, and response equipment storage areas. Photo documentation for photographs taken by the inspectors during the site inspections is included in Attachment B to this report.

At one site, inspectors observed corrosion coupon replacement occurring within oil processing piping as part of BPXA's pipeline and equipment maintenance program. Integrity testing markings on piping and process vessel exteriors, also a result of BPXA's pipeline and equipment maintenance program, were commonly observed.

The following potential discrepancies or areas of concern were identified during the SPCC physical facility inspection and are summarized in the following statements:

1. Not all SPCC-regulated oil storage containers or container group areas were found depicted

in the facility diagrams (noted at sites FS1, FS2, FS3, LPC, COTU, DS11, DSL3, GC1, GC3, BOC Bulk Fuels, BOC Bulk Chemical, A Pad, C Pad, D Pad, G Pad).

2. Not all SPCC-regulated oil storage containers observed during the inspections were found to be listed on facility oil storage container inventories (noted at sites FS1, FS2, FS3, LPC, DS11, GC1, GC3, BOC Bulk Fuels, BOC Bulk Chemical, A Pad, C Pad, D Pad, G Pad).

3. Secondary containment provisions were not always apparent for all stationary, oil product tanks, indoors and outdoors oil separation and treating vessels and equipment with capacities greater than 55-gallons, OFOE with capacities greater than 55-gallons (transformers; an impracticability statement in the SPCC Plan is not considered acceptable), outdoor flowlines, gathering lines, and piping over pads (impracticability statement in the SPCC Plan is not considered acceptable), and oil products truck loading areas. Inspectors did visually note, and were often informed by BPXA personnel, of containment measures in modules which included floor sumps, raised floor edges, or other floor drain systems leading to tanks or impoundments. However, the presence of secondary containment structures or areas and corresponding design or volumetric information applicable to the types of containers, equipment, and areas mentioned above was not specified in the SPCC Plan. This, combined with a lack of storage capacity information for most of these items, led to frequent uncertainties over whether adequate secondary containment was being provided. Even if adequate secondary containment is provided for indoor oil processing vessels, inspectors noted portions of vessels at LPC, GC1, and GC3 that extended out from structures, and the presence of containment measures for the outdoors portions was uncertain. Adequate secondary containment impoundment holding capacity was particularly questioned at GC1, and also at GC3 where floor drains inside modules that lead to an outdoor impoundment were found left open. Additionally, compromises in impoundment construction also called into question impoundment containment and imperviousness adequacy. This was noted at FS1, where an outdoor impoundment intended to contain drainage from the site displayed gaps in the metal panels forming the impoundment walls. Secondary containment provisions for most of GPB's bulk, stationary oil product tanks were addressed in the SPCC Plan and typically appeared adequate, with the exception of Turbinol Select tanks at the BOC Bulk Chemical site. Containment measures for these tanks were not discussed in the SPCC Plan and the presence of containment measures was uncertain.

4. The presence of overfill prevention devices installed on containers to avoid discharges, in accordance with good engineering practice requirements of 112.8(c)(8), was uncertain with tanks at the BOC Bulk Fuel and Bulk Chemical sites. Some controls or gauges may have been present but were either not visible to fuelers/operators or displayed data of questionable units.

5. At the BOC Bulk Fuel site, inspectors questioned whether pipe supports were properly designed and constructed, as required under 112.8 (d)(3), upon noting that timbers supporting some SPCC-regulated piping exhibited signs of shifting.

RECORDS REVIEW OBSERVATIONS:

Records review conducted while onsite at the various inspected GPB sites consisted of viewing SPCC and FRP-required records easily obtainable by facility personnel. BPXA maintains a documentation system that includes keeping hardcopy records for some activities at facilities, keeping computerized records accessible by facilities or select employees, and keeping certain other hardcopy records at BPXA's Anchorage, Alaska headquarters. Additionally, ACS maintains separate records for SPCC and FRP-related activities they perform on behalf of BPXA, such as spill response equipment inspection and deployment events, ACS personnel trainings, and sump and containment area "dewatering" events they perform for BPXA. Many of the SPCC and FRP-related records the inspection teams were interested in viewing were available at various sites and were easily retrieved when requested by the inspectors.

Below is a listing of materials that were obtained from BPXA for review along with a brief evaluation of the record or document as it applies to SPCC and FRP compliance at GPB. Some records were provided to the EPA inspectors during the inspections and some were provided to EPA by BPXA headquarters personnel after the inspection.

1. ADEC Regulated Aboveground Storage Tank – Monthly In-Service Inspection Report; for FS2 facility, August 2007. This completed checklist documents BPXA's visual, external inspection of ADEC-regulated (>10,000-gallons) tanks. The checklist includes a listing of inspection procedures. This document supports facility compliance with EPA SPCC container inspection and recordkeeping requirements under 112.7(e) and 112.9(c)(3).

2. ADEC Regulated Aboveground Storage Tank – Monthly In-Service Inspection Report; for FS3 facility, August 2007. This completed checklist documents BPXA's visual, external inspection of ADEC-regulated (>10,000-gallons) tanks. The checklist includes a listing of inspection procedures. This document supports facility compliance with EPA SPCC container inspection and recordkeeping requirements under 112.7(e) and 112.9(c)(3).

3. Daily Visual Tank Inspection Guide Lines. This 1-page document lists tank inspection items to view during daily rounds and was obtained at the FS2 facility. This document supports facility compliance with EPA SPCC container inspection requirements under 112.7(e) and 112.9(c)(3).

4. Computer printout of inspection and maintenance activities for 9/24/07 at FS2 well pads. This document supports facility compliance with EPA SPCC inspection and recordkeeping requirements under 112.7(e) and 112.9(c)(3).

5. PRIDE Tour Readings Report for the COTU, September 2007. This computer printout summarizes inspection checks of the bulk storage tanks at the COTU under BPXA's bar-code inspection tour system known as "PRIDE". This document supports facility compliance with EPA SPCC container inspection and recordkeeping requirements under 112.7(e) and 112.8(c)(6).

6. FS1 Visitor Safety Orientation and Map. This sheet, provided to facility visitors, serves as a general site map and includes pertinent health and safety information. This document supports facility compliance with EPA SPCC and FRP diagram and evacuation plan requirements.

7. LPC Visitor Safety Orientation and Map. This sheet, provided to facility visitors, serves as a general site map and includes pertinent health and safety information. This document supports facility compliance with EPA SPCC and FRP diagram and evacuation plan requirements.

8. EPA Storage Tank Integrity, Document No. UPS-US-AK-ALL-ALL-HSE-DOC—00205-2. This document provides direction for performing in-service tank inspections for EPA-regulated aboveground oil storage tanks of between 55-10,000 gallons. The document mentions that this BPXA program is based on STI's SP001-3 standard. The document lists inspection procedures and contains blank examples of the EPA-regulated container inspection forms the inspectors saw in use in GPB.

9. North Slope Release Reporting, Clean-Up, and Disposal Procedure, Document No. UPS-US-AK-ALL-ALL-HSE-DOC-00047-2. This document provides guidance and describes the process for conducting agency spill reporting at BPXA-operated sites. The document summarizes applicable agency regulations and summarizes the requirements that must be applied in meeting agency obligations.

10. Piping Diagram of GC1. This diagram depicts the piping layout of the pipelines that feed from well pads to GC1. This diagram was not included in the SPCC Plan.

11. 2007 WOA Pigging Schedule. This sheet lists the daily maintenance pigging schedule for intended pipelines in the WOA. This document supports facility compliance with EPA SPCC flowline maintenance requirements under 112.9(d)(3).

12. E Pad Well Pad Inspection Report for September 24, 2007. This computer generated report represents a completed checklist for E Pad. This document supports facility compliance with EPA SPCC inspection and recordkeeping requirements under 112.7(e) and 112.9(c)(3).

13. Worksite HSE Walk-Through / Inspections Procedure (Document Number UPS-US-AK-GPB-ALL-HSE-DOC-00023-3, Revision Date May 4, 2003, Print Date 9/25/2007. This document provides a standard operating procedure for health, safety, and environment of production facilities by operators and supervisors.

14. ADEC Regulated Aboveground Storage Tank – Monthly In-Service Inspection Reports, Annual In-Service (Walk-Around) Inspection of Regulated (EPA Only) Containers (55-<10,000 gallons), and Annual In-Service (Walk-Around) Inspection of EPA Regulated Container Storage Areas (for Drums and Totes). Completed versions of these reports were provided for the GC1 site (an ADEC form dated August 31, 2007 and EPA forms dated September 27 and November 21, 2006). The forms include inspection procedure

information. These documents support facility compliance with EPA SPCC container inspection and recordkeeping requirements under 112.7(e) and 112.9(c)(3).

15. GC1 Aerial Photo. This undated photograph was not in the SPCC Plan and was provided to the inspectors to aid in site familiarization during the inspection.

16. GC-1 Plan Diagram. This diagram depicts the relative positions of GC-1 skids, or modules, and locations of outside tanks. The diagram is not to scale. The reverse side of the diagram is a GC-1 Safety Orientation. The diagram was used to record notes during the facility walk-through.

17. Diesel Unloading Check List 01-MHT-401 (BOC Bulk Fuels Facility). This is a checklist for tanker truck operators during unloading of tanker trucks to above-ground diesel fuel storage tanks at the GPB BOC Bulk Fuels Facility. This checklist does not contain any provisions for monitoring liquid level in the receiving tank during unloading, as required in 112.8(c)(8).

18. BPXA Empty Drum Recycling Manifest. This blank form indicates information to be filled in when empty drums are submitted to BPXA's empty drum crushing facility.

19. GC3 Water Treatment Overview Diagram, revised 12/18/02. This simplified diagram depicts the water treatment process at GC-3 (which also treats water from GC-1). The treated water is used to increase production by injection, or is disposed of in a separate formation.

20. GC3 Oil System Overview Diagram, revised September 1998. This simplified diagram depicts the treatment process for high pressure and low pressure produced multi-phase (water, gas, crude oil) oil. Resulting partially treated oil is sent to FS-3 for further processing.

21. GC3 Plot Plan. This diagram depicts the relative positions of GC-3 skids, or modules, and locations of outside tanks. The two included copies of the diagram contain inspector's markings.

22. GC3 Aerial Photo. This undated photograph was not in the SPCC Plan and was provided to the inspectors to aid in site familiarization during the inspection.

23. GC3 Flow Diagram. This is a simplified diagram of some of the piping within the GC3 processing facility.

24. C Pad Well Pad Diagram. This diagram was provided to the inspectors and is similar to the diagram contained in the SPCC Plan. The attached version contains inspector's field markings.

25. BPXA Course Specification – General EMS and Compliance Training. Consists of an outline of training topics covered under BPXA's Environmental Management System

(EMS) training. This training is provided annually to all BPXA personnel across the North Slope and others "who reasonably may influence BPXA environmental impacts or compliance obligations", and includes a segment titled "Spill Prevention Control and Countermeasures/Pollution Prevention". This document supports facility compliance with EPA SPCC training requirements under 112.7(f).

26. BPXA Course Specification – EPA SPCC and ADEC Oil Discharge Prevention and Contingency Plan Training – HSEENV038. Consists of an outline of topics covered under this training provided to "those BPXA and BPXA-contracted personnel who operate, inspect, repair or test oil equipment at BPXA assets having an EPA- or ADEC-required oil spill prevention plan". The document states that this course satisfies the EPA requirement 40 CFR 112.7(f)(3) for annual SPCC briefings. This document supports facility compliance with EPA SPCC training requirements under 112.7(f).

27. BPXA Course Status Report printout. This computer printout is a listing of BPXA North Slope employees and their status regarding receiving either "General EMS and Compliance Training (HSEENV001)" or "Oil Discharge Prevention Training (HSEENV038)". The printout indicates whether applicable workers, listed under positions including operators, planners, technicians, engineers, supervisors, etc …, have taken the required training in 2007. This document supports facility compliance with EPA SPCC training requirements under 112.7(f).

28. Training Records for representative workers of BPXA contractor Alaska Supply Chain Integrators, LLC (ASCI). The provided computer records list the training history through 2007 (going back to 2001 for one person and back to 1989 for the other) for 2 representative ASCI employees. The records indicate that these personnel received trainings in a variety of topics including the EMS training listed as item # 25 above and other health & safety and job-specific training and awareness subjects. This document supports facility compliance with EPA SPCC training requirements under 112.7(f).

29. COTU Operators Records. The provided computer records list the 2006/2007 training history for current operators at the COTU site. Most operators are BPXA employees but the records also include one contracted personnel. The records indicate that these personnel received trainings in a variety of topics including the oil-handling trainings listed as items #'s 25 and 26 above and other health & safety and job-specific training and awareness subjects. This document supports facility compliance with EPA SPCC training requirements under 112.7(f).

30. Diesel Fuel Off Loading Training. This printout is a listing of truck drivers from BPXA-contracted companies that underwent fuel off loading training in 2007. The printout lists the drivers as being employees of Alaska West, Big State, and Carlile. These companies frequently transfer fluids at GPB as part of BPXA support activities, and the records contain a handwritten notation as being applicable to drivers that service the COTU and BOC sites. The provided record includes several marked and signed Diesel Unloading Checklists used to train the personnel. This document supports facility compliance with EPA SPCC training requirements under 112.7(f).

31. Alaska West training attendance log from January 29, 2007 and an outline for Alaska West's EM01 Environmental Management System course. Alaska West is a trucking contractor to BPXA that conducts activities in GPB including fuel deliveries. A memo from Alaska West indicates that their drivers also receive training in BPXA's EMS course (listed as item #25 above). The records contain a handwritten notation as being applicable to Alaska West drivers that service the BOC site. This document supports facility compliance with EPA SPCC training requirements under 112.7(f).

32. Person Training History printouts for four VECO personnel serving as fuel drivers at GPB. VECO is a support contractor to BPXA that conducts activities in GPB including fuel deliveries. These computer printouts indicate that these personnel received trainings in a variety of topics including an Environmental Management System training (presumed to be similar to item # 25 above) and other health & safety and job-specific training and awareness subjects. The records contain a handwritten notation as being applicable to VECO drivers that service the COTU site. This document supports facility compliance with EPA SPCC training requirements under 112.7(f).

33. BPXA List Employees Report, printed October 2, 2007. The provided computer records list the 2005-2007 training history for current Operations and Maintenance Team Lead personnel at the primary treatment and separation sites in GPB. The provided records indicate that these personnel received the oil-handling trainings listed as items #'s 25 and 26 above. This document supports facility compliance with EPA SPCC training requirements under 112.7(f).

34. ADEC Regulated Aboveground Storage Tank – Monthly In-Service Inspection Reports, and Annual In-Service (Walk-Around) Inspection of EPA Regulated Container Storage Areas (for Drums and Totes). Completed, representative reports were provided to EPA for the GC1 site (an ADEC form dated August 31, 2007 and EPA forms dated September 6, September 16, October 2, and November 21, 2006) and for the FS2 site (an ADEC form dated July 31, 2007 and an EPA form dated December 29, 2006). The forms include inspection procedure information. These documents support facility compliance with EPA SPCC container inspection and recordkeeping requirements under 112.7(e) and 112.9(c)(3).

35. BPXA Corrosion, Inspection and Chemicals (CIC) Group Report – Internal Inspection of FS1 Skim Oil Tank # 15-1938. This report covers the scheduled internal and external inspection in 2005 of this tank according to API 653 standards. Inspection data (both visual and ultrasound) are provided. Only minor coating damage was noted from the inspection, and the tank was returned to service following coating repairs. This document supports facility compliance with EPA SPCC container inspection requirements under 112.7(e) and 112.9(c)(1) and (3).

36. BPXA Corrosion, Inspection and Chemicals (CIC) Group Report – Inspection of GC1 Diesel Tank # T-01-0004. This report covers the scheduled internal and external inspection in 2006 and 2007 of this tank according to API 653 standards. Inspection data (both visual and ultrasound) are provided. No repair recommendations resulted and the

tank was rated as acceptable for continued service. This document supports facility compliance with EPA SPCC container inspection requirements under 112.7(e) and 112.9(c)(1) and (3).

37. BPXA Corrosion, Inspection and Chemicals (CIC) Group Report – Inspection of BOC Bulk Fuel Facility Diesel Tank # T-44-0411. This report covers the scheduled internal and external inspection in 2006 of this tank according to API 653 standards. Inspection data (both visual and ultrasound) are provided. The inspection found minor interior floor pitting, minor interior floor and wall coating chipping, and some external moss. Re-coating of the interior was recommended and moss removal occurred. This document supports facility compliance with EPA SPCC container inspection requirements under 112.7(e) and 112.8(c)(6).

38. Owner-User Inspector Review of Boiler and Pressure Vessel NDE Report for A-1st stage separator VSP-03-0001A at GC3. This report covers a 2004, abbreviated on-stream automated ultrasonic examination of the vessel to meet State re-certification non-destructive examination (NDE) requirements. Inspection data are provided. The inspection no significant changes since the last inspection in 1999. This document supports facility compliance with EPA SPCC container inspection requirements under 112.7(e) and 112.9(c)(1) and (3).

39. BPXA Plant Inspection Report for A-bank dehydrator number V-309A at GC3. This brief report indicates that this vessel was visually inspected in 1999 following cleaning for decommissioning. The unit was found to have been cleaned adequately but no corrosion inspection was performed. This document supports facility compliance with EPA SPCC container inspection requirements under 112.7(e) and 112.9(c)(1) and (3).

40. Owner-User Inspector Review of Boiler and Pressure Vessel NDE Report for B Train HP separator 16-1241 at FS2. This report covers a 2006 comprehensive off-line automated ultrasonic examination of the vessel to meet State re-certification NDE requirements. Inspection data are provided. The inspection found no significant damage and rated the vessel fit for continued service. This document supports facility compliance with EPA SPCC container inspection requirements under 112.7(e) and 112.9(c)(1) and (3).

41. Owner-User Inspector Review of Boiler and Pressure Vessel NDE Report for B Treater 16-1246 at FS2. This report covers a 2006 comprehensive on-stream automated ultrasonic examination of the vessel to meet State re-certification NDE requirements. Inspection data are provided. The inspection found no significant damage, added additional corrosion rate monitoring points, and rated the vessel fit for continued service. This document supports facility compliance with EPA SPCC container inspection requirements under 112.7(e) and 112.9(c)(1) and (3).

42. NDE Records from 2002-2007 for select GPB well lines. This data table summarizes percent wall loss by linear foot for the select wells lines. The data indicates that some pipelines displayed advanced wall loss percentages over the monitoring period. This document supports facility compliance with EPA SPCC flowline maintenance

requirements under 112.9(d)(3).

43. Specification for UL 142 Aboveground Storage Tanks; Document No. SPC-AK-58-302. This is a BPXA Site Technical Practice for basic requirements for the design and fabrication of single or double-wall aboveground storage tanks for flammable and combustible liquids constructed to Underwriters Laboratories142 standards. This specification summarizes various construction and engineering criteria to be followed and references related BPXA technical specification documents and other applicable guidance or standards issued by other groups such as ADEC, API, ASTM, and STI. This document supports facility compliance with EPA SPCC container use and inspection program requirements under 112.7(e) and 112.9(c)(3).

44. CIC Storage and Process Tank Integrity; Document No. UPS-US-AK-GPB-ALL-HSE-DOC-00097-3. This document outlines an inspection program covering regulated tanks with a design pressure less than 15 psig operated by BPXA. The document covers inspection requirements, recordkeeping, and change in service situations, and references other related BPXA, ADEC and API documents. Appendix B is a detailed listing of tank inspection guidelines. This document supports facility compliance with EPA SPCC container use and inspection program requirements under 112.7(e) and 112.9(c)(3).

45. CIC Portable Tank Management Program; Document No. UPS-US-AK-GPB-ALL-HSE-DOC—00159-3. This document covers the program for inspecting regulated portable tanks with capacities of 10,000 gallons or more to ensure that BPXA operates in accordance with good industry practice, regulatory requirements, and any existing waivers. Topics such as new tank procurement, applicable regulations, inspection responsibilities, types, and frequencies, recordkeeping, and repairs are covered. This document supports facility compliance with EPA SPCC container use and inspection program requirements under 112.7(e) and 112.9(c)(3).

46. Criteria for Corrosion Control Strategy; Document No. CRT-AK-06-10. This is a BPXA Site Technical Practice is applicable to BPXA-operated equipment (predominantly static pressure containing systems) and associated plants that are subject to internal or external corrosion as a result of exposure to process or natural environments. Typical equipment addressed by this strategy includes wells, including casings, valves, and Christmas trees; pipelines, including 3-phase well lines and other pipelines; facility piping, vessels, tanks, boilers and exchangers; and critical structures such as pipe racks. Topics covered include BPXA's corrosion history, the corrosion control process, damage assessment and response, data management, technology development, corrosion threats, and an NDT technique selection table. This document supports facility compliance with EPA SPCC container use maintenance program requirements under 112.7(e) and 112.9(c)(1) and (3) and (d)(1) and (3).

47. 2007 Inline Inspections, and 2008 In-Line Inspection Candidate Pipelines. The first record is a computer printout listing the 2007 inline inspection dates for 20 different GPB 3-phase or processed oil pipelines segments (8 to 36 inch diameter; 0.9 – 9.7 miles length) that run from well pads to gathering/flow stations or other consolidation points

(i.e. Skid 50). The listed previous inspection dates indicate that while some of these pipelines were inspected within the past year, some had not been inspected for up to 15 years. Inspection results are not presented. The second record lists 18 other pipeline segments, similar to the first list in terms of sizes, distances, and products, proposed for inspection in 2008. Some of the proposed pipelines have not been inspected since 1991 or 1992. This document supports facility compliance with EPA SPCC flowline maintenance requirements under 112.9(d)(3).

48. Maintenance Pigging Data. This sheet summarizes the maintenance pigging frequency for several selected flowlines and provides the latest 2007 pigging date. The lines carry either 3-phase material or produced water, and the given pigging frequencies are designated as either monthly, quarterly, or annually. This document supports facility compliance with EPA SPCC flowline maintenance requirements under 112.9(d)(3).

49. Report: BPXA 24" VECTRA (MFL) Metal Loss inspection A-74 A Pad to GC3. This report summarizes the 2007 in-line, metal loss inspection of this 24-inch diameter, 3-phase, 2.57-mile long pipeline. The deepest identified anomaly is reported as 59% of the pipe wall thickness, and the report included the opinion that the majority of the identified anomalies are external. None of the detected anomalies were attributed to seam weld material loss or pipe mill anomalies (flaws associated with fabrication or installation). This document supports facility compliance with EPA SPCC flowline maintenance requirements under 112.9(d)(3).

50. Report: BPXA 24" VECTRA (MFL) Metal Loss inspection D-36 D Pad to GC1. This report summarizes the 2007 in-line, metal loss inspection of this 24-inch diameter, 3-phase, 1.47-mile long pipeline. The deepest identified anomaly is reported as 55% of the pipe wall thickness, and the report included the opinion that the majority of the identified anomalies are external, but the two deepest anomalies may be structural features. None of the detected anomalies were attributed to seam weld material loss or pipe mill anomalies (flaws associated with fabrication or installation). This document supports facility compliance with EPA SPCC flowline maintenance requirements under 112.9(d)(3).

51. BPXA Off Pad Oil Releases Greater Than 1 Bbls (9/2006 to 10/13/2007). One of the two releases described in this report consists of a 1.19 bbl (50 gallon) methanol/crude oil release from a pig launcher. Some of the fluid remained on a pad and secondary containment system but some impacted the adjacent tundra. The second report consisted of a 165 bbl (6,930 gallon) release of diesel fuel from a contractor's vehicle; this spill also impacted tundra. This document supports facility compliance with EPA FRP spill history reporting requirements. The provided document updates the spill history appearing in the facility's FRP, which contains listings up to 2006.

Copies of the above materials are included in Attachment C to this report.

INSPECTION DEBRIEF:

Upon concluding inspections at individual GPB sites over the course of the five-day inspection event, each inspection team held a debrief meeting at each inspected site with those BPXA personnel that had served as the team's escorts or were key site personnel the team met with upon arrival. EPA briefly described the findings of the inspection activities, thanked BPXA for their assistance and cooperation in answering questions, escorting the inspectors, and providing requested records, and indicated that additional records forthcoming from BPXA headquarters in Anchorage would also be reviewed and then factored into the final inspection results. Additionally, at the conclusion of each inspection day, members of both inspection teams met together back at BPXA's Prudhoe Bay Operations Center for a debrief provided to upper-level BPXA management, regulatory compliance, and operation personnel. These day-end debriefs included a conference call link with BPXA's Anchorage, Alaska headquarters, allowing appropriate BPXA personnel located there to participate.

Both inspection teams departed the North Slope at the conclusion of inspection activities on September 28, 2007.

INSPECTION FOLLOW-UP ITEMS:

The following items were identified for follow-up with BPXA:

- The oil container inventory included in the SPCC Plan should be expanded to include all containers, vessels, and equipment subject to SPCC regulations, and facility diagrams should have all subject containers or container group areas marked. Since not all EPA-regulated oil storage containers are on facility inventory lists, some are possibly being left out of EPA-required facility inspections. Secondary containment information for much of the regulated oil separation and treating vessels and equipment is needed in the SPCC Plan.
- The impracticability statements for secondary containment for outdoor oil pipelines and OFOE (transformers and circuit breakers) need to be re-evaluated and either revised to adequately describe the impracticable situations or be removed if they can not be applied.
- The facility should re-classify the East C Pad, BOC Bulk Fuel Site, and BOC Bulk Chemical Site as non-production facilities regulated under EPA's 112.8 SPCC regulations and address the applicable requirements both in the SPCC Plan and at each facility accordingly.
- The SPCC Plan contains EPA-related references to containers with a capacity of 660 gallons. This volume was one of the qualifying criteria thresholds under the pre-2002 SPCC rule but was abandoned under the 2002 rule change. As the facility is following the 2002 SPCC Final Rule, the SPCC Plan should be revised to delete this reference (found on page SPCC-6 and possibly other pages).